

CLAIMS

What is claimed is:

1. A device for maintaining a surgical field in an isolated environment comprising an enclosure for separating said surgical field from an atmosphere ambient to said device, and at least one access port, wherein said access port enables admission into said enclosure.

2. The device of Claim 1, wherein said at least one access port enables admission of at least one surgical means into said enclosure.

3. The device of Claim 2, wherein said surgical means is selected from the group consisting of surgical instruments, robotics, sensors, and human hands.

4. The device of Claim 1, wherein said device further comprises means for evacuating said isolated environment.

5. The device of Claim 4, wherein said evacuating produces an environment with reduced oxygen tension.

6. The device of Claim 5, wherein said reduced oxygen tension is essentially oxygen-free.

7. The device of Claim 4, wherein said device further comprises means for refilling said isolated environment.

8. The device of Claim 7, wherein said refilling produces an environment with reduced oxygen tension.

9. The device of Claim 8, wherein said reduced oxygen tension is essentially oxygen-free.

10. The device of Claim 7, wherein said refilling produces an environment with an increased oxygen tension.

5 11. The device of Claim 1, wherein said device further comprises means for filling said isolated environment.

12. The device of Claim 11, wherein said filling produces an environment with reduced oxygen tension.

10 13. The device of Claim 11, wherein said filling produces an environment with an increased oxygen tension.

14. The device of Claim 1, wherein said isolated environment is essentially pathogen-free.

15. The device of Claim 1, further comprising a transport attachment.

15 16. The device of Claim 15, wherein said transport attachment is lockingly engaged to said device.

17. The device of Claim 15, wherein said transport attachment is detachably engaged to said device.

18. The device of Claim 15, wherein said transport attachment has a reduced oxygen tension.

19. A device for maintaining an injured area in an isolated environment comprising an enclosure for separating said injured area from the atmosphere ambient to said device, wherein the oxygen tension of said isolated environment is controllable.

5 20. The device of Claim 19, wherein said device comprises at least one access port.

21. The device of Claim 19, wherein said device further comprises means for evacuating said isolated environment.

22. The device of Claim 21, wherein said evacuating comprises means for oxygen release and retention of a heavy gas within said isolated environment.

10 23. The device of Claim 21, wherein said evacuating produces an environment with reduced oxygen tension.

24. The device of Claim 23, wherein said reduced oxygen tension is essentially oxygen-free.

15 25. The device of Claim 21, wherein said device further comprises means for refilling said isolated environment.

26. The device of Claim 24, wherein said refilling produces an environment with reduced oxygen tension.

27. The device of Claim 25, wherein said reduced oxygen tension is essentially oxygen-free.

20 28. The device of Claim 21, wherein said isolated environment has an increased oxygen tension.

29. The device of Claim 19, wherein said device further comprises means for filling said isolated environment.

30. The device of Claim 29, wherein said filling produces an environment with reduced oxygen tension.

5 31. The device of Claim 30, wherein said reduced oxygen tension is essentially oxygen-free.

32. The device of Claim 29, wherein said filling produces an environment with an increased oxygen tension.

10 33. The device of Claim 19, wherein said isolated environment is essentially pathogen-free.

34. The device of Claim 19, further comprising a transport attachment, wherein said transport attachment is lockingly and detachably engaged to said device.

35. The device of Claim 34, wherein said transport attachment has a reduced oxygen tension.

15 36. The device of Claim 19, wherein said injured area is selected from the group consisting of surgical incisions, burns, lesions, and broken bones.

37. A device for maintaining material in an isolated environment comprising an enclosure for separating said material from an atmosphere ambient to said device, wherein the oxygen tension of said isolated environment is controllable.

20 38. The device of Claim 37, wherein said device comprises at least one access port.

39. The device of Claim 37, wherein said device further comprises means for evacuating said isolated environment.

40. The device of Claim 39, wherein said evacuating comprises means for oxygen release and retention of a heavy gas within said isolated environment.

5 41. The device of Claim 39, wherein said evacuating produces an environment with reduced oxygen tension.

42. The device of Claim 41, wherein said reduced oxygen tension is essentially oxygen-free.

10 43. The device of Claim 41, wherein said device further comprises means for refilling said isolated environment.

44. The device of Claim 43, wherein said refilling produces an environment with reduced oxygen tension.

45. The device of Claim 44, wherein said reduced oxygen tension is essentially oxygen-free.

15 46. The device of Claim 43, wherein said refilling produces an environment with an increased oxygen tension.

47. The device of Claim 37, wherein said device further comprises means for filling said isolated environment.

20 48. The device of Claim 47, wherein said filling produces an environment with reduced oxygen tension.

49. The device of Claim 48, wherein said reduced oxygen tension is essentially oxygen-free.

50. The device of Claim 47, wherein said filling produces an environment with an increased oxygen tension.

5 51. The device of Claim 37, wherein said isolated environment is essentially pathogen-free.

52. The device of Claim 37, wherein said material is transplant material.

53. The device of Claim 52, wherein said transplant material is selected from the group consisting of organs, tissues, cells, and artificial materials.

10 54. The device of Claim 37, wherein said maintaining comprises transporting said material.